

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of:

Inquiry Regarding Carrier Current Systems,)
including Broadband over Power Line) ET Docket 03-104
Systems)

Reply Comments of William A. Tynan, W3XO

1. As an Extra Class amateur primarily interested in the bands above 50 MHz, I wish to submit these Reply Comments on the Subject Docket.
2. In reviewing the numerous comments submitted, I note that **well over a thousand radio amateurs went to the trouble to comment.** The Commission will, I hope, recognize this large volume of people opposed to allowing BPL and act accordingly.
3. Two of those who commented, Soifer¹ and Paige² observe that, the distance of 30 meters (approximately 98 feet) between the BPL emitter and the amateur station's receiving antenna assumed is incorrect in many cases. Paige notes that, in his case, this distance is only about 10 feet (approx. 3 meters). This lessor figure is certainly more typical of many residential neighborhoods where amateurs live, and thus should be used in assessing the magnitude of interference which BPL will cause.
4. The Central States VHF Society ("CSVHFS")³ points out that harmful interference, caused by harmonics from BPL may extend well into the VHF, UHF and possibly the microwave region. The Commission should note that some BPL advocates suggest that the devices might notch out the amateur HF allocations or move to other frequencies when a strong HF signal is detected. **Such measures will have no effect on the harmful harmonics the devices are certain to generate.**
5. SMIRK⁴ expressed concern about the effect of BPL interference on the very weak signals frequently encountered on the 50 MHz band as well as higher amateur bands.

¹Comments submitted by Raphiel Soifer, W2RS.

² Comments submitted by Bruce Paige, KK5DO

³ Comments submitted by the Central States VHF Society

⁴Comments submitted by the Six Meter International Radio Klub

6. The National Academy of Sciences⁵ expressed its fear with respect to radio astronomy bands. Joint comments filed by The Association of Maximum Service Television Inc. (AMST and The National Association of Broadcasters (NAB)⁶, expressed concern regarding potential interference to television channels 2 through 6. **I find it interesting that no comments were filed by those involved with aviation radio.** I would think this should be **major** concern.
7. It seems to me that **the Commission must look into all of these concerns before proceeding further with BPL.** Not only analyses should be made, but tests conducted on various types of sites, including weak signal VHF amateur stations.
8. I note that the National Telecommunications and Information Administration (NTIA)⁷ has expressed concern about the possibility of interference to public safety mobile and base stations operating in the 30 to 50 MHz region. I wonder if interference to these radios, which use FM, is threatened, what effect will BPL have be on my, and other hams', reception of weak single-sideband and CW signals on 50 MHz?
9. ARRL's comments were very interesting and should be taken as a landmark in this Proceeding.⁸ Unlike most comments in favor of BPL, they included an extensive analysis of interference likely to result from it. This analysis should, of course, be followed up by testing by them, by FCC and by those proposing BPL. ARRL also makes good point in noting that FCC denied amateurs an allocation at VLF due to fears from power companies that very low power amateur stations might disrupt their carrier current controls. Now, they want to put BPL on hundreds of power lines and into thousands of homes in the face of amateur stations running up to 1.5 kW.
10. Like ARRL and many others commenting on the Subject Docket, I am convinced that BPL represents a major threat to all users of the radio spectrum. Once deployed, and many people have it in their homes, it will be impossible to do away with it, no matter how much interference it causes or receives. In their comments, some of those proposing BPL says that **"it will improve as time passes."** What do they mean by such a statement? Do they expect to later bring pressure on the Commission to allow BPL even greater power levels and more spectrum, in order to provide even faster data rates and/or cover even greater distances? If this turns out to be the case, initial

⁵Comments submitted by the National Academy of Sciences

⁶ Joint comments filed by the National Association of Broadcasters and the Association of Maximum Service Television

⁷ Letter dtd July 1, 2003 from F.R. Wentlane, Associate Administrator Office of Spectrum Management, National Telecommunications and Information Administration, to

Edmond J. Thomas, Chief FCC Office of Engineering and Technology

⁸ Comments filed by ARRL, American Radio Relay League Inc.

BPL interference will be nothing compared to what it will cause in coming years. Amateurs have been losing allocated spectrum to commercial interests for years. **It now looks as if they will take ALL of it.**

11. The Commission may be convinced that BPL is the “best thing since sliced bread” to bring broadband to most of the people. But, the simple fact is that it isn’t. Short hop EHF microwave links, inferred lazars or fiber optics would provide better and faster connection with greater security and no interference to anyone. Not only will BPL cause interference to many licensed radio services, including amateurs, but it will receive interference from many of these same services. How does the Commission plan to resolve complaints of both kinds of interference? The effect of BPL interference may end up in countless courts across the Nation, keeping the lawyers busy for years. If the Commission’s intent is to provide work for lawyers, BPL seems like a perfect vehicle to do just that. In addition to the Country’s courts, Congress may very well become involved after it receives letters from some six-hundred-thousand angry hams who can no longer hear anything on 20 meters, or any other band; another uncounted thousands from computer users who’s BPL broadband connection is being disrupted by that “ham down the street.” Not only will the routine operations of the Country’s radio amateurs be affected, but their ability to serve in cases of emergency. Many will have given up the hobby and thus not be available to help in emergencies. Those still on the air,, may well be prevented from providing communication due to heavy BPL interference.
12. Lets not commit another blunder like that in the mid 1950s when the Commission authorized the CB Band at 27 MHz. How much has been spent on enforcement both here and other countries? So called “free-banders” still operate in the Band and on both sides of it, thumbing their noses at the FCC and whatever the communications authority in their country is called..
13. For the reasons I have presented; I, like ARRL and thousands of individual amateurs and many other organizations, am unalterably opposed to using BPL as a means of bringing broadband into people’s homes. I ask the Commission to reject the pleas of the power companies and others attempting to foist this horror on the world. I further suggest that the power companies concentrate on keeping the lights on.

Respectfully submitted,

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National Academy of Sciences

National Association of Broadcasters & Association of Maximum Service Television

National Telecommunications Information Administration